

US PATENT & TRADEMARK OFFICE

PATENT APPLICATION FULL TEXT AND IMAGE DATABASE



(1 of 1)

United States Patent Application**20040105850****Kind Code****A1****Loscalzo, Joseph ; et al.****June 3, 2004**

Methods of treating vascular diseases characterized by nitric oxide insufficiency

Abstract

The invention provides methods of treating and/or preventing vascular diseases characterized by nitric oxide insufficiency by administering a therapeutically effective amount of at least one nitrosated angiotensin-converting enzyme inhibitor, nitrosated beta-adrenergic blocker, nitrosated cholesterol reducer, nitrosated calcium channel blocker, nitrosated endothelin antagonist, nitrosated angiotensin II receptor antagonist, nitrosated renin inhibitor, and optionally at least one compound used to treat cardiovascular diseases and/or at least one antioxidant, or a pharmaceutically acceptable salt thereof, and/or at least one compound that donates, transfers or releases nitric oxide, elevates endogenous levels of endothelium-derived relaxing factor, stimulates endogenous synthesis of nitric oxide or is a substrate for nitric oxide synthase. The antioxidant may preferably be a hydralazine compound or a pharmaceutically acceptable salt thereof. The compound that donates, transfers or releases nitric oxide, elevates endogenous levels of endothelium-derived relaxing factor, stimulates endogenous synthesis of nitric oxide or is a substrate for nitric oxide synthase may preferably be isosorbide dinitrate and/or isosorbide mononitrate. The vascular diseases characterized by nitric oxide insufficiency include a cardiovascular disease and a disease resulting from oxidative stress.

Inventors: Loscalzo, Joseph; (*Dover, MA*) ; Vita, Joseph A.; (*Hingham, MA*) ; Loberg, Michael D.; (*Boston, MA*) ; Worcel, Manuel; (*Boston, MA*)

Correspondence Name and Address: EDWARD D GRIEFF
HALE & DORR LLP
1455 PENNSYLVANIA AVE, NW
WASHINGTON
DC
20004
US

Serial No.: 692724

Series Code: 10

Filed: October 27, 2003

U.S. Current Class:

424/94.1; 514/23

U.S. Class at Publication:

424/094.1; 514/023

Case Creation Option

Case "10692724US20060709" already exists. Please overwrite it or cancel the operation.

The Contents of Case "10692724US20060709"

Qnum	Query	DB Name	Thesaurus	Operator	Plural
Q1	6635273.PN.	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q2	TRANSDERMAL NEAR5 paTCH	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q3	VASCULAR DISEASE	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q4	ANTIOXIDANT	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q5	ISOSORBIDE DINITRATE	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q6	ISOSORBIDE MONONITRATE	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q7	COENZYME q	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q8	HYDRALIZE HYDROCHLORIDE	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q9	HYDRALAZINE HYDROCHLORIDE	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q10	Q4 AND Q9	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q11	Q5 AND Q10	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q12	Q6 AND Q11	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q13	Q7 AND Q12	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q14	Q9 AND Q13	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q15	Q2 AND Q14	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q16	Q3 AND Q15	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q17	GLUTATHIONE	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q18	("VITAMIN c") OR (ASCORBIC ACID)	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q19	("VITAMIN E") OR (TOCOPHEROL)	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q20	CYSTEINE	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q21	(aCETYL-CYSTEINE)	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES

Q22	(BETA CAROTENE)	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q23	(COENZYME q)	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q24	UBIQUINONE	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q25	Q4 SAME Q5	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q26	Q24 SAME Q25	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q27	Q17 SAME Q25	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q28	Q2 SAME Q27	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q29	Q2 AND Q27	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q30	Q2 AND Q27	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q31	Q25 AND Q17	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q32	Q5 SAME Q17	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q33	Q2 SAME Q32	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q34	Q2 SAME Q5	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q35	Q2 SAME Q7	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q36	Q2 SAME Q8	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q37	Q2 SAME Q9	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q38	Q2 SAME Q17	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q39	Q2 SAME Q18	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q40	Q2 SAME Q19	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q41	Q2 SAME Q20	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q42	Q2 SAME Q21	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q43	Q2 SAME Q22	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q44	Q2 SAME Q23	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q45	Q2 SAME Q24	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q46	Q41 SAME Q34	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q47	Q40 SAME Q34	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q48	Q39 SAME Q34	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q49	Q4 SAME Q34	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q50	Q2 SAME Q7	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q51	Q34 SAME Q7	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q52	Q2 SAME Q6	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q53	Q2 SAME Q7	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES

Q54	Q52 SAME Q53	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q55	5627191.PN.	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q56	Q55 SAME Q4	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q57	Q55 SAME Q5	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q58	Q55 AND Q5	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q59	Q55 AND Q6	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q60	Q55 AND Q4	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q61	4868179	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q62	4868179.PN.	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q63	5645839.PN.	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q64	Q63 AND Q9	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q65	Q62 AND Q9	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q66	Q5 AND Q65	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q67	Q2 AND Q65	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q68	Q2 AND Q63	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q69	Q68 AND Q4	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q70	Q9 AND Q69	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q71	Q3 AND Q69	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q72	Q3 AND Q65	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q73	Q5 AND Q69	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q74	Q62 AND Q63	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q75	Q2 AND Q4	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q76	Q5 AND Q75	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q77	Q76 AND Q73	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q78	Q76 AND Q62	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q79	Q76 AND Q55	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q80	(SUPEROXIDE DISMUTASE) OR ("RN-9054-89-1")	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q81	CATALASE OR ("RN-9001- 05-2")	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q82	("RN-013-66-5") OR (Glutathione peroxidase)	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q83	Q4 AND Q5	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES

Q84	Q6 AND Q83	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q85	Q9 AND Q84	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q86	Q80 AND Q85	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q87	Q5 AND Q9	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q88	Q82 AND Q87	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q89	Q81 AND Q87	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q90	Q77 AND Q80	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q91	Q77 AND Q81	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q92	Q77 AND Q82	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q93	Q73 AND Q82	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q94	Q73 AND Q81	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q95	Q73 AND Q80	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q96	Q55 AND Q81	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q97	Q9 AND Q81	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q98	(ace INHIBITOR) OR (ANGIOTENSIN CONVERTING ENZYME INHIBITOR)	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q99	Q98 AND Q3	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q100	Q99 AND Q5	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q101	Q9 AND Q100	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES
Q102	Q101 AND Q73	PGPB,USPT,USOC,EPAB,JPAB,DWPI	None	ADJ	YES

 Overwrite

Cancel